

**AADHAAR CARD BASED PUBLIC RATIONING SYSTEM**

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Abstract — Now an afternoon's ration card plays extremely essential function inside the distribution of groceries (sugar, rice, oil, kerosene, and many others) for the peoples on the premise of the poverty line as according to the rule of thumb of GOI (govt. of India). Sure irregularities inside the current system include the inaccurate distribution of the groceries and illegal sale. With this and with the help of MATLAB code will procedure and evaluate with the scanned photograph with the database for you to similarly determine the quantity of groceries allocated to the individual. This can spark off the 8051 controller which drives the motor, with the help of motor motive force circuit in an effort to offer the character with the allocated quantity of the groceries. The automated device in addition sends a SMS to the man or woman and the government notifying that the allocated amount groceries has been delivered with the assist of GSM. The usage of raspberry Pi our whole device capability increases and we are able to put in force diverse things without converting the hardware.

.Keywords: GOI, Aadhaar Card, MATLAB code, 8051 controller, GSM, Raspberry Pi

I. INTRODUCTION

Ration card is utilized by the majority to get the backed groceries provided with the aid of the authorities of India. The prevailing gadget has especially drawbacks. First one is inaccurate dimension of the products done via the shopkeepers. 2d one, people who do no longer buy the allotted groceries until the give up of month, shopkeepers sell them to every other person without informing the people. In this gadget in place of the usage of ration card, Addhar card may be linked to the ration card. Addhar card might be scanned by the digital camera set up at the computer or by way of the digicam of laptop and it will be as compared to the already saved database. If the individual identification is matched then the primary factor decided with the aid of the system is whether the character is from BPL (under poverty line) or ordinary person. This choice is essential due to the fact government of India has allocated exclusive amount of groceries to each elegance of the people.

The 8051 controller at the side of Raspberry pi is used to improve the machine functionality and make the machine strong. The matched sign may be given to the 8051 controller and it turns on the motor with the help L293D motor motive force. After dispensing the predetermined quantity of grocery, motor could be became off. For weight of the fabric load mobile is used and weight of fabric is continuously shown in the LCD. After the transport of the ration fabric a SMS will be send to the person and the authorities about the receiving of the cloth by the reputable individual. SMs could be dispatched with the help of GSM.

II. LITERATURE REVIEW

Authors: A.N. Madur, Sham Nayse

“Automation in Rationing System using Arm 7”,

Description: This system is based on radio frequency identification of customer. Here each customer is provided with RFID cards. In this system, by using RFID and by entering the password we can access. First user is authenticated, and then system shows the balance of person. User have to enter the amount of Kg he want to withdraw. System checks his account. If the user will have sufficient balance to withdraw the current amount.

Authors: Rajesh C. Pingle, P. B. Borole

“Automatic Rationing for Public Distribution System (PDS) using RFID and GSM Module to Prevent Irregularities”,

Description: In this automated system conventional ration card is replaced by smartcard in which all the details about users are provided including their AADHAR (social security) number which is used for user authentication.

Authors: S.Valarmathy, R.Ramani

“Automatic Ration Material Distributions Based on GSM and RFID Technology”

Description: proposed to use RFID and GSM technology based Ration cards by showing the RFID tag into the RFID reader. Then the controller checks the customer codes and details of amounts in the card.

Authors: K.Balakarthik,

“ Cloud-Based Ration Card System using RFID and GSM Technology”

Description: Presents an efficient method for the user to buy the products in the ration shop by just flashing the card at the RFID reader at the ration store. The user authentication is done by sending a random password text to the user mobile which has to be entered in a keypad. The purchase is validated by the employee only after the details are entered in a windows application which stores the user's personal and purchase information. Here the user can check their purchase details in a dedicated website.

Authors: Dhanojmohan, Rathikarani, Gopukumar

"Automation in ration shop using PLC"

Description: proposed a methodology for ration shop automation using embedded PLC. Further the updating to the government database about the stock available and the customer details were not carried out. In this system, by using RFID and by entering the password we can access. First user is authenticated, and then system shows the balance of person. User have to enter the amount of Kg he want to withdraw. System checks his account. If the user will have sufficient balance to withdraw the current amount.

III. PROPOSED SYSTEM

In this project, we have planned an Automatic Ration Materials Distribution supported GSM and AADHAR Technology to avoid the drawbacks. AADHAR technology effectively used to solve a number of them. GSM used to communicate the data between 2 people or quite two persons to update the data depends on the wants. GSM based access-control system permits solely approved or accountable persons to get the materials from ration retailers. A GSM system consists of an antenna or coil, a transceiver (with decoder) and a transponder electronically programmed with distinctive data. There are several sorts of GSM systems offered within the market.

V. SYSTEM ARCHITECTURE

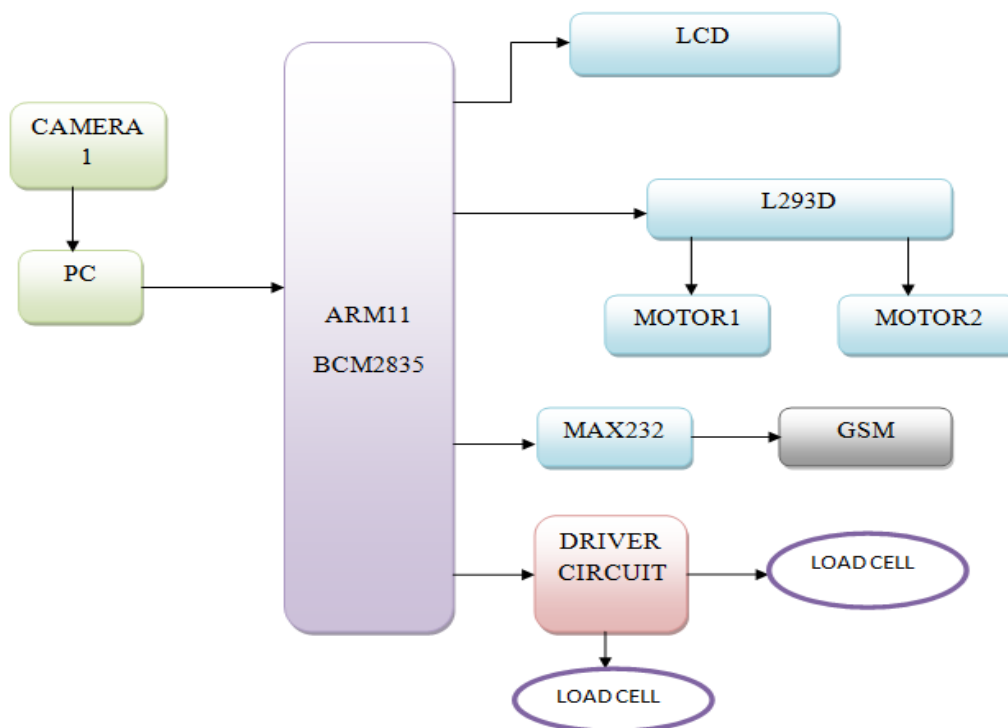


Fig. System Architecture

BLOCK DIAGRAM DESCRIPTION:

The block diagram of an Automatic Ration Materials Distribution Based on GSM and Raspberry Pi Technology. This system consists of various parts such as Raspberry Pi, GSM, microcontroller, motor driver, a load generator system, LCD display and a camera. In this project we are using a ARM11 microcontroller. The consumer enters amount of material that he wants to buy from the ration shop by the means of key board or touch screen. The Ethernet standards comprise several wiring and signaling variants of the OSI physical layer in use with Ethernet. The GSM system use to provide text message to consumer about his or her account.

Camera: To get the materials in ration shops need to show the CAMERA tag into the CAMERA reader, then controller check the customer codes and details of amounts in the card, and provide the details to the ARM11.

ARM11: Microcontroller is the heart of the ration materials distribution system. ARM11 is 32 bit microcontroller. High performance system, with 32-bit instruction interface and 64-bit interface to the data cache i.e two level cache memory. The ARM11 take the captured image from the camera and display it into the LCD.

LCD Display:

A liquid-crystal display (LCD) is a flat panel display, electronic visual display, or video display that uses the light modulating properties of liquid crystals. Liquid crystals do not emit light directly. The LCD is used in a wide range of applications including computer monitors, televisions, instrument, aircraft cockpit displays, and signage. The most common in consumer devices such as video players, gaming devices, clocks, watches, calculators, and telephones, and have replaced cathode ray tube (CRT) displays in most applications. The LCD screen is more energy efficient than a CRT. The power consumption is very low while compare with other devices.

LIQUID CRYSTAL DISPLAY:

LCD stands for **L**iquid **C**rystal **D**isplay. LCD is finding wide spread use replacing LEDs (seven segment LEDs or other multi segment LEDs) because of the following reasons:

1. The declining prices of LCDs.
2. The ability to display numbers, characters and graphics. This is in contrast to LEDs, which are limited to numbers and a few characters.
3. Incorporation of a refreshing controller into the LCD, thereby relieving the CPU of the task of refreshing the LCD. In contrast, the LED must be refreshed by the CPU to keep displaying the data.
4. Ease of programming for characters and graphics.

These components are “specialized” for being used with the microcontrollers, which means that they cannot be activated by standard IC circuits. They are used for writing different messages on a miniature LCD.

VI. ADVANTAGES

- Increased corruption in the Govt. As well as market sector will be prevented if system becomes automated. Individual Ration Card search supported family members' Addhar number/mobile number.
- Covers the process of AADHAR Card supplies at the panchayet level in villages and rate in urban areas totally change system so reduces human efforts.
- Data entry of Ration Card data into the e RCMS at district level through out-sourcing.
- Verification of data by the Farm Credit System department and protection of the records
- Printing of new card on A-4 Size paper, Panchayat wise at districts.
- Robust system.
- Cost effective approach.
- Time saving approach.

VII. APPLICATIONS

- Replacement for existing Ration Distribution System It can replace the existing Government Of India's Ration Distribution System that is chargeable for distributing essential commodities to an oversized range of individuals through a network of Federal Protective Service (Fair worth Shops) on a revenant basis.
- Our system also performs the same functions in an automatic manner.
- Retail Market Sector It can be utilized in retail market sector like in searching Complexes, Supermarkets, and Ration Shops to change the method and to sell things while not human intervention.
- Large Scale implementation If implemented on massive scale it will be utilized in ration process factories and organizations for at the same time consideration and packaging of things that area unit meant for commerce.

VIII. CONCLUSION

This proposed project will give a safe, secure and efficient approach of public distribution system. By using this technique ration retailers solves the matter of an excessive amount of manual method publicly Distribution System (PDS). This proposed project positively paves approach for a corruption reduced Asian country in the future.

This new technology gives resolution and this work can create a nice amendment publicly distribution system and provides profit to the government regarding current stock info and scale back the work force.

IX. FUTURE WORK

In this area of automation we see several operations obtaining machine-controlled be it shopper connected operations. So why the Public Distribution System ought to lag behind? Our project is additionally AN automation technique which might be enforced in numerous day to day disciplines and might effectively replace PDS.

Anti-corruption tool: Because of the automation during this field, the chances of corruption area unit reduced, which is a common, apply during this trade. The factors such as Adulteration, Hoarding, Price hike of ration merchandise will be simply eliminated victimization this approach.

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